additional memory for receiving a spectral distributions of other plants from the field and programmable logic circuitry;

c) said logic circuitry having a program to compare the reflected spectral distribution of other plants with the memorized spectral distribution of the first species and to provide an output indicating substantial similarity between the distributions for effecting selective application of chemicals to the plants of the first species as the associated farm vehicle traverses a field.

2. An apparatus as recited in Claim 1 in which said identifier comprises a Digital Signal Processor.

3. An apparatus as recited in Claim 1 in which said program includes the routine of making a regression analysis to determine the similarity between a first plant species and the other plants.

4. An apparatus as recited in Claim 1 in which the logic circuitry includes a switch for modifying the degree of similarity to be detected between the spectral distributions.

5. A low cost, lightweight, high speed spectral sensing method for identifying and collecting information on the physical condition of objects for remote analysis of their physical condition, comprising the steps of :

a) sensing the spectral distribution of a plurality of segments of wave lengths of light

reflected by the object;

b) electronically measuring the magnitude of the segments of the reflected wavelengths to define a wide spectrum distribution of light received from said object; and

c) transmitting the spectrum distribution to a readable electronic memory for subsequent analysis and identification of the physical condition of the object.

6. The method as recited in claim 5 which includes the step of visually depicting the spectral distribution.

7. The method recited in Claim 6 which includes the step of receiving and converting the electronic signals into digital information for storage, comparison or analysis of the object and its condition.

8. A high speed, low cost apparatus for selectively identifying objects, including fluids and tissue, and their condition, from within a population; said apparatus comprising:

a) a sensing device for receiving reflected light from a sample object from the population, said device including a lens diffraction device for separating the reflected light into a plurality of segments of wavelengths and for measuring the magnitude of the segments of reflected light to define a spectral distribution;

b) a digital identifier connected to said sensing device and having a memory for receiving and storing a spectral distribution of light representing the sample object from said population;

c) said digital identifier also having a memory for receiving and storing sequential

spectral distributions from additional objects of the population;

d) said digital identifier having logic circuitry programmed to compare the subsequent spectral distribution with the memorized spectral distribution and to provide an output indicating similarity between the distributions.

9. An apparatus as recited in claim 9 in which the output of the digital identifier is connected to an activator for applying an action to an identified, similar object.

10. A low cost, digital identifier apparatus for identifying similarities of spectral distributions of two objects, said apparatus comprising:

a) a micro controller;

b) said micro controller having electronic memory elements for receiving digital signals reflecting a first wide spectral distribution of light segments reflected from an object;

c) electronic memory elements for receiving digital signals reflecting spectral distribution of light segments from other objects;

d) logic circuitry including memory containing instructions for a regression analysis program for comparing the first spectral distribution of light segments with the spectral distribution of another object and for generating an output signal reflecting the results of said comparison.

11. An identifier apparatus as recited in claim 10 in which said apparatus is a Digital Signal Processor.

12. In an apparatus as recited in claim 10 in which said logic circuitry is programmed to generate an output signal upon calculation of a high coefficient of correlation.

13. A low cost, high speed method for facilitating evaluation of selected objects, said method comprising the steps of:

a) obtaining a spectral distribution of reflected light segments from at least one sample object of a population;

b) sequentially generating a spectral distribution of additional objects of a population;

c) comparing said spectral distribution of the additional objects with the distribution of said sample object and producing an output signal when said distributions are substantially similar.

14. A method as recited in claim 13 in which said spectral distribution of said sample object is obtained by reflecting light from an actual object of said population.

15. A method as recited in Claim 13 in which the degree of similarity required to generate the output signal can be increased or decreased.

16. An apparatus for accumulating and transmitting a wide spectral analysis of [an] objects including tissue and fluids for early analysis and detection of its condition , said apparatus comprising:

a) a sensor array for accumulating a plurality of charges reflecting a wide spectrum

color distribution of light segments reflected by an object to be analyzed;

b) a transmittal device connected to said array for transmitting said spectral distribution to a memory device for early analysis of the spectral distribution of light of said object to detect its physical condition.

17. An apparatus as recited in claim 17 in which an analog to digital converter is interposed between said array and said transmittal device for transmitting said distribution in digital form.

18. A lightweight, portable apparatus for sampling the condition or identity of agricultural plants and their fruit and for electronically recording the sample for identification and analysis, said device comprising:

a) a housing having an opening for receiving light therethrough,

b) a diffraction device for receiving said light and for diffracting said light into a plurality of segments having different wavelengths,

c) an array carried by the housing and aligned to receive a plurality of segments having different wavelengths and to generate a voltage whose magnitude generally correlates to the intensity of said segments to define a spectral fingerprint; and,

d) a communication circuit associated with said housing for transmitting, by segment, the spectral fingerprint to an electronic memory for analysis of the condition or identify of the agricultural product.

19. An apparatus as recited in claim 18 in which said communication circuit is a compliant RS 232 port.

20. An apparatus as recited in claim 19 in which said communication circuit is connected to a memory device.

21. A low cost, lightweight, sensing method for obtaining spectral information on the physical condition of objects for subsequent analysis of their physical condition, comprising the steps of :

a) sensing the spectral distribution of a plurality of segments of wave lengths of light reflected by the object;

b) electronically measuring the magnitude of the segments of the reflected wavelengths to define a spectrum distribution of light received from said object; and

c) transmitting the spectrum distribution to a readable electronic memory for subsequent analysis and identification of the physical condition of the object.

22. A method as recited in claim 21 in which said magnitude of the segments of the reflected wavelengths is converted to digital format prior to its transmission.

23. A method as recited in claim 21 in which said spectral distribution is transmitted via an RS 232 port.

24. A method as recited in claim 21 in which said spectral distribution comprises at least 3 data points.

25. A method for comparing selected objects, said method comprising the steps of:

a) obtaining a spectral distribution of reflected light segments from at a representative of a sample species of a population;

b) sequentially generating a spectral distribution of additional species of a population;

c) comparing said spectral distribution of the additional species with the distribution of said representative and producing an output signal when said distributions are substantially similar.

26. A method as recited in claim 24 in which said spectral distributions comprises at least three data points.

27. A method as recited in claim 24 in which said spectral distributions are compared by a mathematical algorithm.

28. A low cost apparatus for selectively identifying objects, including fluids and tissue, and their condition, from within a population; said apparatus comprising:

a) a sensing device for receiving reflected light from objects of a population, said device including a lens diffraction device for separating the reflected light into a plurality of segments of wavelengths and for directing said segments upon an array for measuring the

magnitude of the segments of reflected light to define a spectral distribution;

b) a digital identifier connected to said sensing device and having a memory for receiving and storing a spectral distribution of light representing a sample object from said population;

c) said digital identifier also having a memory for receiving and storing sequential spectral distributions from various objects of the population;

d) said digital identifier having logic circuitry programmed to compare the subsequent spectral distribution with the memorized spectral distribution and to provide an output indicating similarity between the distributions.

29. An apparatus as recited in claim 27 in which said sensing device is calibrated such that the same segments of diffracted light wavelengths are repeatedly separated and diffracted upon substantially the same area of the array.

30. An apparatus as recited in claim 27 in which said sensing device is aligned such that at least one segment of wavelengths of light is always diffracted upon the same area of the array.

31. An apparatus as recited in claim 27 in which said spectral distribution comprises at least three data points.